

BOOK REVIEWS

RICHARD V. FRANCAVIGLIA. 2000. **The Cast Iron Forest: A Natural and Cultural History of the North American Cross Timbers.** (ISBN 0-292-72515-9, hbk.; 0-292-72516-7, pbk.). Univ. of Texas Press, P.O. Box 7819, Austin, TX 78713-7819, U.S.A (512-471-4032). \$45.00 hbk., 24.95 pbk. 269 pp., 15 color and 52 b&w photos, 8 maps, 12 line drawings, 6" x 9".

More than anything else, *The Cast Iron Forest* portrays the Cross Timbers, conceptualized as a region, as having a life of its own, growing and changing with time and captivating those that enter, including the author. While the book is an objective analysis of historical maps, travel diaries, economic statistics, and census records, many passages reveal an intensely personal fascination with the Cross Timbers. Richard Francaviglia is a historical geographer at the University of Texas at Arlington. Like many professionals and others transplanted to Texas, he has been nourished by Texas pride and now finds that his roots have grown deep into the Cross Timbers sandy clay.

Francaviglia begins the book by developing the concept of "Cross Timbers" from several perspectives: "The Cross Timbers...are a forested archipelago largely surrounded by a sea of prairie. Centered roughly between the 97th and 98th meridians, the Cross Timbers vegetation comprises generally north-south trending belts of scrubby oak trees." Next, "...the Cross Timbers typically appears as dense stands of post oak and blackjack oak trees that rarely exceed about thirty feet in height, but that are visible for a considerable distance across the prairie." And "...the term...Cross Timbers referred to a large area that consisted of a swath of trees stretching north of Waco along the Brazos River of Texas and extending far north into...present-day Oklahoma." He then examines the natural history—the geology, soil, and climate correlated with the vegetation, and the important constituent species. The conclusion is: "...they are considered a separate region largely because they are mostly surrounded by prairie, and would otherwise would not be so noticeable. Throughout the Cross Timbers, then, the distinctive oak forests are framed by prairie and developed on sandstone [emphasis his]."

The bulk of the book, however, is an examination of historical maps and writings to trace the history of the conceptualization of the region in the minds of the Native Americans, Spanish/French explorers, and Anglo settlers and farmers, and finally the contemporary urbanites. This is the real strength of the book and a significant contribution to the non-technical literature. In so doing, Francaviglia is able to trace the perceptions through 5- and 10-year intervals. Use of these historical data necessarily involves interpretations of why certain features were or were not added to maps and diaries, and readers will want to keep that in mind. However, his interpretations appear to be reasonable and without particular ideological bias. Especially fascinating is the argument that prevailing perceptions (e.g. "dangerous and evil," "barrier to travel," "plentiful source of wood and game") often influenced political, economic, and cultural responses of the public and governments.

As a reader not interested so much in the historical aspects, I bogged down in some of the detail. It seemed to me that surely every map and every written reference published before 1900 is described. In fact, the author appears also to have gotten somewhat lost in the details and introduced some inconsistencies. For example, he discusses the Cross Timbers on important maps of 1849 and 1853, concluding (p. 104), "By the mid-nineteenth century, the Cross Timbers appear on a wide variety of popular maps" and "Historical geographer Ralph Brown observed that the Cross Timbers 'achieved much notoriety of a favorable sort' by the mid-nineteenth century." However, just two paragraphs later (p. 106) states, "By the mid-nineteenth century, the Cross Timbers thus began to lose their status as a landmark."

The author's transition to the twentieth century is marked by a move from documenting travels, Indian skirmishes, and log-cabin architecture to outlining farming patterns, population shifts,

popular regional identity, and increasing conservation awareness. Even regional literary works, graphic art, and music are reviewed. One of the nicest features of the book is, in the last chapter, a four-page bulleted outline of the topics covered and a six-page summary of the author's interpretation of the region's history.

Before *The Cast Iron Forest* was written, the literature on the Cross Timbers region was largely scattered and not readily available. However, this book provides, without being academically technical, references to most or all of the historically significant writings. Although enthusiasts of regional heritage will find it especially interesting, it is essential reading for anyone wanting a good overview and knowledge of the natural and cultural history of this "cast iron" region.—Roger W. Sanders, Associate Collections Manager, Botanical Research Institute of Texas.

DENNIS W. WOODLAND. 2000. **Contemporary Plant Systematics, Third edition.** (1-883925-25-8, hbk.). Andrews University Press, 213 Information Services Bldg., Berrien Springs, MI 49104-1700, U.S.A (616-471-6134, <http://www.andrews.edu/press>) \$64.99 hbk. 560 pp., numerous b&w photos and line drawings, CD of over 4,700 color images

Contemporary Plant Systematics flows from Woodland's teaching experience to fill the needs of his own students. His goal in writing a text is to provide "a well-illustrated, broad-view, beginning text that would give the students, wherever they may live in the world, sufficient botanical understanding of vascular plants that would utilize the changing world of global information." In some ways he has succeeded and in others he has not.

The book is divided roughly into three portions. Printed page tabs, which mark the chapters and other divisions, are a helpful innovation. The first four chapters cover an introduction of systematics as a subject, nomenclature, identification tools, and field and herbarium methods. The second section (5 chapters) is by far the largest. It encompasses an extensive survey of pteridophyte, gymnosperm, and angiosperm families with each group preceded by an explanation of special characteristics and terms. The last six chapters cover more advanced topics: history of the field, including contemporary systems and methods of analysis; pertinent literature; origins of the vascular plant groups; a survey of morphological, chemical, and other criteria; conservation issues; and the role of botanical gardens.

The field and identification portion (early chapters) is thorough, but the other chapters on principles sometimes lack depth. For example, speciation is covered in one page and one diagram. Likewise, in the discussion of phenetic and cladistic methods, relevant terms are defined and sample dendrograms and cladograms are illustrated. However, there is neither an attempt to explain how the distances are calculated nor examples worked out to help the student assimilate the methods. An appendix with simple four-taxon problems, mathematical algorithms, character and distance tables, and step-by-step solutions would be very helpful.

Woodland is to be congratulated for the innovative chapter on conservation. In it he covers the major conservation issues that pertain to preserving biodiversity, including genetic engineering of organisms. Conservation is rarely addressed by texts in plant systematics but is an endeavor that systematists are invariably drawn into during their careers. His survey of botanical gardens is a nice addition, but many instructors would rather exchange this information for more detail on principles. The chapter on taxonomic criteria is also strong because each major topic is contributed by an authoritative researcher: Nels Lersten on plant anatomy, Rolf Sattler on morphology, Loren Rieseberg on molecular systematics, Cliff Crompton on palynology, Peter Holland on ecology and biogeography, and Woodland on cytology.

The weakest portion is the large, page-consuming survey of families. Each family is treated